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Anniversary Discourse

THE PROFESSIONS IN WORLD TURMOIL*

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The world we live in has been engaged in recent years in an ecstasy of vast and lofty planning. Programs of a world democracy, then of universal peace under a superstate, then plans for economic equality and security which were first launched in Soviet Russia, and more recently in another form have seized the imagination of our own America, have marched like pageants across the stage of our ideals.

Today in a reaction from these visions half of Europe is following another desperate adventure into the night. This time it is the idea of nationalism achieved by armed force, the pursuit of God with a bayonet and the gas bomb. The capacity, indeed the subjectivity, of men and women in the mass for capture by almost any ideal which can be written large in the sky in tinted letters seems never to weaken. We follow still Peter the Hermit and Mahomet, and the Pied Piper as readily in these days of schools and communications and machines as we did in the past centuries of illiteracy, and village life, and wood, and meadow.

It takes some courage then when all the world is painting on the constellations with a brush made from a comet's tail, to use Kipling's simile, to deal as I propose to do

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tonight with the mere saws and files and nails of our own work benches. In the end one suspects the movement and direction taken by the world of men is much more influenced by the routine ways and works of people than it is by their day dreaming. The coming of the stone hammer, and later of the iron plowshare, and of the steam engine, of the gasoline motor, of the tin can, and of the refrigerator, of machine-made clothes and of rayon, have had more to do with the molding of our life today, I suspect, than did Socrates and St. Augustine, Napoleon, and Marx. It seems possible that the most important thing in the world to the destiny of mankind is not its dreams or its hopes or its visions, but the coefficient of the ways its individual members live from day to day.

When we deal, as I am going to do for a few minutes, with what seem to me the trends affecting the day's work and the social position of the doctor and the lawyer, to get down to my muttons at last, the subject may well be in the light of 2000, A. D., for example, of considerable importance. The study in the changes of the daily life of the factory workman or of the house builder might be of even greater importance, but these last are not to doctors and lawyers as interesting as the surroundings of their own immediate lives.

Now, what is happening to the two professions, which I have named, in this present Twentieth Century? In the first place, why link at all the two professions? There need be no doubt on this whatsoever. Of all the highly skilled and regulated occupations open to men, the lives and work of the doctor and the lawyer are certainly today the most similar, and are in history among the most significant. In the long reach of the ages, only the priest who deals with men's souls has been as jealously watched by the public, as devotedly trained, as socially honored, as has been the doctor who deals with men's bodies, and the lawyer whose business is their property and their liberty. Today the priest has surrendered part of his older functions to the school and the printing press. His current position is altered.

The present day development of the medical and legal crafts with their numbers, their income, their organization, and their social status in modern communities, their regime of training so strikingly parallel is obviously a single topic in many respects. The doctor and the lawyer are blood brothers in the eyes of the average man. I seldom hear a youngster debating between the two professions as a career, because the tastes and interests which give proficiency are different. But once the choice is made, the novice must face almost the same practical problems in both careers. He must go through a similar period of training; he must expect much the same sort of income, and of social position in the community in which he lands. His conduct standards with their emphasis on loyalty to the patient or client tempered by allegiance to public policy, his peculiar relations inside his own profession, the limitations on advertising his wares, for example, are quite similar. Indeed, both professions pretend to be sciences, and try to be sciences, and both, I think, remain chiefly arts.

The link between them is not altogether new. Some day when you need a cool shower of humility, I suggest you turn to the little-read back pages of Gulliver's Travels, if a doctor has time to read at all. There in Gulliver's account of the Kingdom of Horses, Dean Swift launches out at both of us. In what are almost parallel columns he accuses both professions of murder, fraud and greed. In the lawyer's jargon, he returns the same indictment, but the particulars pleaded are different. In the medical simile, we have the same disease, but the symptoms vary a little. These libels on the two brotherhoods, yours and mine, are in the end the same libel. We are both pronounced frauds who profit by disaster. Those whose enemies unite against them are friends, indeed.

Certain changes or trends underway in the last two centuries and accentuated in the present world turmoil, are modifying deeply the ways of life of both of these professions. There is a quite general agreement, for example, among observers on several of these sources of change.

I propose to exclude changes in mere ideas or theories held by mankind about life, and to cling, instead, to causes or tendencies which can be definitely seen over a long stretch, and in the sense of science measured and counted. Then having so selected what is as near as may be an acknowledged set of long-curve developments, to go on a little to debate what they are doing to us, and what they seem likely to do in both professions.

On this plane we will not include the impendency of war which blazes in the headlines every morning this winter, nor will we include the sentiment for peace which four years ago seemed just as suggestive and influential and widely spread in the newspapers as today the alarm of war has come to be. Neither war nor peace are new. The oscillations between public sentiment for one and public sentiment for the other are recurrent through history. I omit also the political programs which are now pending in various places, including Washington. Such crusades as nationalism and communism and fascism are like other political phenomena, only fresh forms of old impulses, and demands, at most the product of much deeper causes. Hitler is doing very little that Napoleon did not do. He is even following the same methods. Even the current rise of materialism and the apparent retreat of organized religion from the center of the stage are probably only temporary fluctuations in the trench warfare between man's interest in his life today and his interest in life in eternity. We can deal with more permanent and sterner things than any forms of thought.

From such a viewpoint, in an effort to read not merely the page of human life that happens to be spread in the morning newspaper but in an attempt to read in the long book the chapter headings that have passed and the events and characters that the authors seem to be assembling for the unread pages to come, let us see what has happened to the world that really affects the life of the lawyer and the life of the doctor.

Since the days of Hippocrates and Plato, or even Harvey and Francis Bacon, some important events have intervened

to alter the life of everybody. One of these, for example, is the development of man's control over power; or, to put it another way, the rise of the machine. The electric light, X-ray, automobile, telephone, and elevator, have all affected the doctor's work in recent years. The capacity to manufacture climate is probably upon us today. The microscope a little earlier was in turn a new use of power, involving the capacity to condense light and use it in a specially controlled fashion. Most inventions have affected also the lawyer's ways.

A second factor of increasing intensity is the change in population, and especially the increase in numbers, and its concentration in cities. This tide may wane. But if it does, we have not yet realized the full consequences of even our present conditions. Changes of population produce fresh medical and fresh legal problems. Most of the recent public problems connected with both medicine and law are produced by concentrations of population. New institutions, such as hospitals, subways, tenements, Tammany Halls, arise to vex the doctor and lawyer both. They are primarily the product of more intensive population collections.

A third factor is the cumulation of knowledge. The new world may not be wiser than the old world, but it is infinitely better informed. We know more facts whether we can govern affairs better or not.

A fourth factor is the cumulative rise in educational levels. This becomes of critical importance in our modern world. We are keeping people in school now for about a fifth to a third of their lives in this country. The increase is world wide, on a smaller scale. A learned profession has to be really learned for distinction in a community where everybody is going to school until he or she is fifteen. The public is today called upon to assume the cost of educating doctors because the wages of the profession during what is left of life after an interneship, cannot compete on the average with other trades in the way of repaying the investment. The same will very soon be true of the lawyer.

Now, these four factors that have been named, namely the familiar harnessing of power into machines, and the crowding of the world, and the accumulation of scientific knowledge, and the steady rise in the average education of men are quite distinct and separate things. Any one trend could exist without the other but the interplay between them is very complex. We can detect none the less some of their mingled effects upon the professions of both medicine and law, and upon the lives and work of men enlisted in these curious crafts. We can, if we dare, let us say not as prophets, but as speculators, make some forecast of the alterations in the future.

The first conspicuous consequence on both professions is a great and sudden enlargement within the professions themselves of the time and intensity of training and apprenticeship. Since 1900, let us say, the typical, and I think the average period of training for the doctor has increased at least three years. Your more ambitious medical schools are now calling for a college degree before a student can begin his four years of medicine. This eight year period of university experience is only a foundation for a year or two of interneship afterwards. Exactly the same sort of extension of training for law began twenty years later, but has moved with speed in the last fifteen years. The typical lawyer of a generation ago had about three years of college and law school study combined after high school. Today the typical new licensee in law has at least two years additional training as compared to his father's case, and perhaps three years on the average. There is talk everywhere of further increase.

This increase in the requirement for admission to the professions, so strikingly contemporaneous and similar, is due in part to the increase in the general level of schooling. It is due also in part to the greater knowledge required of the doctor. Stricter character and cultural requirements are expected of the lawyer. In part it is due to pressure of both professions within themselves for self-protection.

So long a period of preparation is expensive. It is costly both to the individual and to society. In other words, it

takes more of the student's time and more of some teachers' time, and of the people who look after the teacher. Legal, like medical education, is to become a heavy public charge. The cost of the medical school has driven more than one university president into the very hospital whose expenses were his ailment.

The education of the doctors and the lawyers has ceased to be a mere professional affair as it was a generation or two ago. Neither profession is any longer able to pay the costs individually in the sense of the individual students or collectively in the terms of the profession supporting training schools. The public by dint of contributing either taxes or endowments has become the purse-holder, and the class room director. What the public may do to the form and content of the education of both professions which they now control, deserves some thought. A situation new in history has come about.

It is obvious with training so expensive and admissions to the schools now a favor instead of a thoroughfare to the student that selective admission on some kind of paternalistic basis as a system will succeed to the old open door policy. The opportunities for favoritism and privilege become acute. All sorts of new contingencies arise.

Another clear trend in both professions is towards stronger internal organization, unity and discipline. These are the consequences chiefly of severer educational requirements. The history of all crafts is that when they become difficult to enter the social walls are builded high around the group who are admitted. The American Medical Association has risen in the last generation to be one of the most closely knit and powerful expressions of a craft that the world has ever seen, outside of the military orders. The doctors have seen also a vast increase in state, local, and particularly of selective professional organizations. The same movement is in process in the law. The American Bar Association is a quarter of a century behind the American Medical Association, for various interesting reasons which we cannot stop to discuss, but it is now steering the same course. If the history of the organized trades is any

guide (we have on this score libraries of experience covering centuries), this new comprehensive and intensive internal organization in the professions will have great issues.

The classic and medieval guilds of merchants are a familiar model. It would seem likely that efficiency and ethical standards would rise. All men take pride in doing well. At the same time some evils will threaten. The new guilds may legislate for their own protection; they may want to shield their own monopolies and nourish their own interests, and be not always mindful of the public which they serve. Property and dogma may rise and demand shelter against unruly and disorderly progress.

I can see signs of such tendencies in both professions. Yours is scornful of, and militant against new schools of thought sometimes. Usually it is right. The lawyers when organized are hostile to new political adventures which disturb the certainty and order which the jurist is trained to value and to nourish. Usually the lawyers are right. But in neither case are the professions infallible and power is not likely to make us more tolerant.

The numbers employed in both professions will probably be fewer in proportion to the population. Today in America the numbers are practically equal in the medical and legal professions. Easy entrance and loose organization of a trade are always accompanied by the maintenance of a marginal circumference of people half in and half out of a profession, made up of weak competitors—weak for various reasons, not always efficiency. Guilds and labor unions have always been inclined to limit enrolment, restrict the number of apprentices and draw sharply the lines of membership. These impulses have been strong in both legal and medical professions during recent economic stresses.

It would seem probable that the professions would develop orders and grades within their own membership. The legal profession, in England, to illustrate, has been for centuries highly organized and sometimes extravagantly self-regulating. It has exhibited characteristically

a series of military grades and whenever the lawyers get complete possession they create more grades. The solicitors and barristers are two separate classes in England. Within the class of barristers we had at one time the sergeant. You remember Sergeant Buzfuz in Dickens. The "King's Counsel", the "benchers," and "outer" and "inner barristers" are all grades. These instances are cited only to show how gradations spring up when a trade or a craft becomes highly organized. So far this tendency is not evident in the American bar, but I think there are signs of it in medicine.

The augmented standards of training and their consequences, that is to greater organization, to smaller numbers, to the possibility of graded levels within each profession, if such should eventuate, are all phenomena recognizable elsewhere in our modern world and in other occupations. Plumbers and barbers, accountants, and engineers, even the cousins of our medico-legal brotherhood the ministers and the teachers, show in various forms all the tendencies that I have been referring to as possible in our own affairs. In each of them the level of formal education has steadily risen in the last century. In each of them there is more of a tendency to increased organization. In each there is an urge for better workmanship and sterner ethical requirements, exactly the kind of thing that dominate the doctor and lawyer today.

Another tendency may be to shop or group practice. The doctor and lawyer have had more independent callings and less of the shop organization, or of the institutional structure than any walk in life perhaps. Only the cultural arts like literature and the stage and painting have been so reliant as the doctor and lawyer have on individual effort. Our closest relatives, the church men and the teachers, however, have for centuries been marked by cooperative labor, or what we might call shop practice. The independent minister is a rarity; the independent teacher scarcely exists. The church and the school, the monastery and the university are the background in the life and work of both of these ancient and learned vocations.

Of all the organized crafts in history, only the doctor and the lawyer have done their work so to speak, on the principle of the human unit, two arms, two legs, and one head. Even in the great guild organizations of classic Greece and Rome, and again in the medieval period, the doctor and the lawyer remained on the whole, solitary craftsmen. The reason is a little illusive. Consultation between several men has been as usual in jurisprudence and the healing arts as it has been in making kettles, or in teaching, or in engineering, or in any craft. Indeed, it is more common and more fruitful than in most affairs.

The tools of the doctor, his herbs and his utensils, like the tools of the lawyer, his books, have been expensive, more expensive than in most crafts, and they are as jointly usable as in any other craft. Why do we not more readily turn to what I call cooperative or shop practice? Perhaps the very vagueness of the arts of health and justice, their very lack of precision or of ease of evaluation, are the secret of the long maintained individualism of the two practitioners. However this may be, there are signs that the institution, the group method of work, the shop, to put it abruptly, is finding a foothold at last in both medicine and law.

In the last two centuries, to turn again to my own profession for illustration, the British solicitor or office lawyer has established the cooperative work shop on a large scale. The metropolitan law office in this country, with a dozen partners, two dozen law clerks and a swarm of stenographers and mechanical and clerical employees is clearly an institution, a shop. On the public side in my own profession large aggregations of lawyers have been assembled in bureaus and prosecutors' staffs. It is nonsense to pretend these men live the life of the old individual lawyer. In a field somewhat intermediate, there are great professional groups which are assembled for railroads, banks, and other enterprises.

Today perhaps half of the American lawyers are working in some sort of institutional structure. They are no longer individuals. They are cogs in a machine. This is new.

It is newer, indeed, than most lawyers have recognized. It is a product in part of machine civilization, and in part of condensed populations, where streets of custom and market places for skill must be set up lest men know not where to buy. And in part, it is a product of specialization, which specialization is brought about by accumulation of ideas and routines in the form of complex laws. It is not a product of the growth of science because there has been no growth of science in the law, but it is clearly influenced by growth of formulas.

We turn to medicine. I need only remind you the same development as well you know, impends there. The hospital, the dispensary, the medical group rise before our inquiring eyes. The hospital has become the theater not only for most treatment that is not trivial but for much of diagnosis. Many laboratory technicians live and have their being under one roof. Many practitioners are free swimmers only in the sense they move from roof to roof, from one hospital to another in the course of the day. The hospital is the consequence chiefly of the machine. It seems to me its benefits are probably cleanliness, light, water, communications and tools, all machine products. Concentration of population makes its expense bearable and its accessibility a treasure. The medical group is another product of similar forces, fumbling its way in this and other countries, but getting here and there a foothold. It is a product again, of the accumulation of knowledge in part, but chiefly the accumulation of routines, of skills with machines. The public health service now richly amplified is a governmental form of the same tendency to group work.

It is not state medicine so much discussed in recent years that threatens the medical profession. It is institutional medicine, in which the state is only a provider of funds at most. The state if carried much further will not be a state in our present sense at all, but only an aggregate of innumerable feudal institutions, as unmanageable, as decentralized as society itself. The surest outcome of the extension of governmental activity is the destruction of

the state itself in the terms in which we think of it at present.

These speculations, or observations, or whatever you will, these day dreams, if you like, all lead in the end to emphasizing the drift in this country to a guild form of life and work in both the medical and legal professions. The drift is part of a wide public tendency to more complete social organization. The politician is in essence nothing but a man ambitious for power and prestige. He has been spreading his sails in this breeze and offering the coercion which the government alone has easy at hand to carry us forward in the direction that public sentiment seems to want us to travel. I doubt if the politician has much to offer, or the government which he controls. The defects and abuses of political machinery are too well demonstrated in experience to justify much reliance on their use.

It seems likely to me if the path of a more ordered and regulated life in labor and business and our professions is to be our way of trying to carry forward the world, then it will take the form of self-regulation, within the boundaries of the crafts themselves, as I have indicated, much more readily and, in the end, more effectively and permanently than through dictation by society as a whole. The effect of the guild, of the group, of the craft, of the class is more impressive than that of the state all through history. In the guild, and there only, it seems, are technical experience and common motives and persistence of purpose sufficiently focused to be effective. The state with its weapons of coercion, the bullet and the prison, is dramatic always, but is effective only in spasmodic form. The motives of the state are transient; its gaze wanders; its processes are easily corrupted. The motives of a craft or a profession are exactly the contrary.

To approach the prospect from the angle of another inquiry one wonders how much this process of crystallization in the profession will reduce its initiative, its adventure, its glamor, so to speak. Are the doctor and lawyer to become mere formalists nestling into the security of high walled societies, drilled in the dogmas by long formal train-

ing, bound and hedged by the prodigious accumulation of their own information and routines, imprisoned by the very heap of tools they have invented? In such case society will surely suffer. Learning will grow sluggish. Science will be smug and content with answering questions and asking none of itself. The adventurous and imaginative minds would turn away from enlistment in orders whose priests are worshipping in these creeds outworn. The threat is real, but I am not much alarmed.

There is always a frontier in the continent of human arts and sciences. Day after day we see what was yesterday an innovation, an adventure, an experiment, reduced to a mere technique which can be taught to any student. Only last week diagnosis by X-ray and the operation of appendicitis were marvels of individual skill, and today the patterns in both are made to a large degree at least for the simpler cases. A few years ago in my own field the income tax and the field of corporate reorganization (to deal with techniques which you do not know, but which again give us examples) were subjects which the average lawyer looked upon with bewilderment. Today the accountant has taken over most of the first topic, reduced to routine, and the second is being taught in law schools.

This process of reducing adventure to familiar patterns goes on so steadily in both professions that it seems to every generation of us as if the skills we had toiled to obtain were unprofitable in our hands. No form of guild control seems ever to have checked the merchant who sought new seas to traffic in, or new markets to create. Such is the case on even a wider scale in the great unexplored professions, whose frontiers are so little advanced as are those that deal with public health, and even more with public order.

In facing, therefore, a regime of vastly greater organization in both professions, we can, I think, welcome some great advantages, be mindful of the pitfalls, but go forward undismayed. The opportunity for imagination and initiative and industry and the seeing eye will be little affected. The great rewards will still go to the brave and

the wise. We have been talking these latter years out of all proper emphasis. The opportunity for human welfare afforded by planning and organization and social forethought and coercion have been exaggerated. If, as, and when, in the lawyer's phrase, you doctors take control of procreation and proceed to plan a brave new world by handling the breeding of men, as you have handled the breeding of fruit flies, you may transform the species, and so alter the factors in the formulae. But, if so, you must change the scientific name of the animal. I am dealing with a swarm called homo sapiens. While that species survives and breeds its young, the profession of medicine and the profession of the law seem to me likely still to offer, as they have done of old, the same magnificent career for the individual who dares.

NINTH ANNUAL GRADUATE FORTNIGHT

"Trauma; Occupational Diseases and Hazards"

October 19 to 31, 1936

THE MEDICAL PROBLEM IN FIRST AID*

ROBERT H. KENNEDY

The proper care of persons sustaining injuries in accidents is one of the greatest public health problems of the present day. We have been awakening to the magnitude of the annual accident toll only in the past few years. Thus far the general public is probably better informed and more interested and aroused than is the general medical profession. The "Principles of Medical Ethics" of the American Medical Association, Chapter IV, Section 1, states: "Physicians, as good citizens and because their training specially qualifies them to render this service, should give advice concerning the public health of the community." Greater knowledge of the first aid problem is necessary in order to conform to the principles and ideals of our profession.

According to the latest report of the National Safety Council 100,000 American lives were lost through accident in 1935. In addition, 9,340,000 people sustained non-fatal injuries. That is, one out of every fourteen persons in the United States was hurt in an accident last year. The odds seem rather large in favor of some of us being among this group in the coming year. The estimated cost of these accidents is $9,500,000 each day during last year, a total of $3,450,000,000.

The dangerous spots as far as death is concerned are in order, first, motor vehicle accidents; second, the home; and third, public accidents which include drownings, burns, falls, heat prostration, freezing, railroad, firearms and poisoning. Only following these do occupational accidents appear, making up less than half the number of traffic deaths. Among these there are more farm deaths than in any other classification of employment.

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* Delivered October 21, 1936.

The order is somewhat different for permanently disabling accidents,—being as follows, the home, the automobile, occupation, public accidents. The order is still different for those temporarily disabled,—the home, public accidents, occupation, the automobile. It is important to note that, in the comparative danger of these three types of results of accident, the home takes first place twice and second place once, while occupational hazard stands in last place once and third place twice.

The National Safety Council and similar organizations are exerting tremendous effort and spending large sums of money in educating the public in accident prevention. Results are evident in reducing the accident frequency rate, although the gross number continues to increase. It appears that for many years to come accidents will constitute a severe personal and economic loss.

Some of the deaths and some of the permanent disability may be prevented by prompt, efficient first aid. The morbidity may be diminished considerably by the same means. The initial care at the site of accident has always been, is, and always will be, rendered usually by lay persons. With nearly ten million accidents a year we cannot expect a physician to be present where they occur, or to arrive before something is done, in the majority of instances. Many times this initial care will be the deciding factor between life or death, between permanent or temporary disability, between prolonged hospital care and loss of time or no disability. Many times treatment given by a physician at office or hospital cannot undo the lack of care, or the improper rendering of it, at the site of accident. As physicians we should know the most approved methods of first aid, not only because we might occasionally be called on to render it ourselves, but largely because we should be able to direct the methods of lay training in proper channels.

It is notable that there has been considerable objection from members of the medical profession to laymen being trained to render first aid. Some apparently believe that knowledge of this subject by the layman will keep practice

away from the doctor. We must remember that in instruction, first aid is uniformly defined as the temporary assistance rendered a sufferer until the arrival of medical aid. There is no intention or desire that it be a substitute for medical treatment. Others apparently think that lay first aid may do more harm to the injured person. For bystanders to do something in case of accident is an evidence of natural sympathy. Even the lower animals crowd around an injured mate and express their sympathy or give their aid. How much better it is to have aid rendered by someone with even a little knowledge and training than by one in absolute ignorance of the first principles, since something will be done anyway. Cooperation of the medical profession in lay first aid instruction should exist, rather than bringing arguments against it.

There has been no organized effort to train the medical profession in first aid. The medical schools which give any instruction in this subject are a rare exception. The result is that the average medical student on receiving his degree knows less about it than a first class Boy Scout. If he takes an internship in a hospital with an ambulance service, if he becomes an industrial, mine, railroad or police surgeon he may become interested. But in most instances these activities are soon shunted to the side line and his interest wanes. The rank and file of the profession consider the subject outside their field or are not aware of its extent and importance. The prime movers in first aid instruction have therefore come from the lay public, aided by an occasional physician. Many different books of instruction have been published, sometimes advocating diametrically opposed methods of care. The content is often criticized by physicians, sometimes justly, but frequently without sufficient practical experience to appreciate why certain items have to be included. Improved forms of treatment are adopted by the medical profession, but may not be incorporated in first aid books for years, because the profession did not know how to place them before a layman practically. In other instances first aid workers have devised improved methods which have not

been adopted generally by the medical profession, because of lack of close contact with the work. Much is to be gained in the care of the injured by closer cooperation between these two groups to their mutual advantage.

A history of the development of first aid does not seem to have been written and the piecemeal evidence of its early existence is unsatisfactory. Many of the miracles of the Bible were probably examples of sensible first aid. In the seventeenth chapter of the First Book of Kings we find an early instance of resuscitation. Elijah lived about 900 B.C. and this was performed by him on the son of the widow of Zarephath. He "fell sick, and his sickness was so sore, that there was no breath left in him." Elijah laid the child upon his own bed. "He stretched himself upon the child three times, and cried unto the Lord." "He revived." This seems to be a forerunner of the modern methods of artificial respiration, possibly the Sylvester method.

War has been a major occupation of the peoples of the earth from earliest known history. Literature is filled with its gruesome details, but there is little reference to affording any means of relief for the wounded, probably because it was usually non-existent. It is likely that the first practitioners of the art of healing in common life were women. The first surgeons were doubtless warriors to whom aptitude or experience gave special skill in treating wounds. Livy tells that after a battle with the Etrurians in the fifth century B. C. the Roman general distributed the wounded among the patricians. Xenophon in his "Retreat of the Ten Thousand" says that after the battle of Cunaxa, about 400 B. C. he appointed eight doctors because there were many wounded. His manner of stating it indicates that they were selected from the other soldiers.

Alexander was accompanied in his march of conquest by the most famous physicians of his age, one of whom extracted an arrow from his shoulder, and another showed great nerve and skill in cutting the barbed head of a javelin from the conqueror's breast. When Ptolemy Philo-

meter received a fracture of the skull in battle, 146 B. C., the surgeons immediately performed the operation of trepanning. Such references are the exception and apparently the general practice was to leave the wounded to die or to recover as best they could with no prearranged plan to care for them.

"At no time during the Middle Ages, or even during the Renaissance did physicians undertake any surgical work." "Even as late as the 11th century the armies had no surgeons."

The St. John Ambulance Association of England may be called the oldest first aid association in the world, originating in 1048 during the Crusades. However, as far as actual work was concerned it really lay dormant for several centuries to be revived in its present form in 1877. It now has thousands of branches in England and scores in Canada. For the most part, even in Ambroise Paré's time, "wounded common soldiers were left to the ministrations of their companions in arms or to the camp followers." Many were killed if they were suffering too much. The nobility in the 16th century brought their own surgeons to war. Paré was originally a barber surgeon and as chief surgeon to King Henry II, saw his first army service at the Battle of Turin in 1537.

The first official sanitary service, foundation of the present army medical service, was created only about three centuries ago. For the first time first aid in war began to be handled through medical organizations to any extent. The layman gladly shifted this responsibility, for which he was not trained, to the military man. But military hospital and relief work left much to be desired and laymen continued to assist. In 1813, during the Napoleonic wars the ladies of Frankfort united to found the Frauenvereine of that city. Its express object was to insure "more complete arrangements for the care of the sick and wounded, and to assist in providing for the wants of the military hospitals of Frankfort without distinction of friend or foe." This organization existed for at least seventy years and may still be active.

The public press was largely responsible for bringing before the English people the entire inadequacy of her medical field service in the Crimean War of 1854. As a result Florence Nightingale and her forty women helpers became a civil volunteer corps in the Crimea. They showed the world what military hospitals ought to be.

Within a month of the start of our Civil War our own medical and hospital field service was found distressingly inadequate. Laymen organized the Sanitary Commission which required many months before it could obtain official recognition. Gradually it grew, supported by committees all through the North, until "its huge four-horse wagons were galloped and halted on the very edge of battle, men sprang from them and, through the thickest of the fight, bore their rescued, wounded men to a place of safety and care provided for them." Clara Barton says: "It is probable that no other act of our country ever won for it the amount of moral credit and respect from other nations which has resulted from this unparalleled display of active humanity." The Sanitary Commission ceased to exist shortly after the Civil War. In all the wars of that time unofficial relief was found necessary but the efforts were sporadic and short lived.

In 1859 a Swiss gentleman, Monsieur Dunant, while traveling in Italy, happened to be in the neighborhood of Solferino on the day of the great battle, the 24th of June. He was impressed by the sufferings on the battle field and in the hospitals where he remained to assist as a volunteer. In 1862 he published a description of what he had seen under the title "Un Souvenir de Solferino" and proposed the founding in every country of permanent societies for the relief of the wounded. This led to an international conference held at Geneva in October 1863 and attended by delegates from sixteen European governments. Plans were made for establishing central relief committees in each country. A second congress was held in August 1864, the delegates having been accredited by their governments with sufficient power to sign a treaty. One was prepared providing for the neutrality and security of hos-

pitals and persons employed in them even after the enemy had occupied the ground, that field hospitals should not be subject to capture, military protection for civilians who cared for wounded in their homes, requisite care and treatment for wounded prisoners, a flag for hospitals and convoys and an arm badge for persons. The design was a red cross upon a white ground. This was a compliment to the country in which the congress was sitting, this being the national flag of Switzerland with the colors reversed—her flag being a white cross on a red ground. This general treaty was signed by twelve governments at first,—a remarkable tribute to the efforts of one individual in private life. His accomplishment was later recognized when in 1901 one-half of the first Nobel Peace Prize was awarded to Monsieur Jean Henri Dunant. The organization was known as the International Committee for Aid to the Military Wounded. It was not long before its tremendous value was proved in the Franco-Prussian War of 1870.

The United States was officially represented at both the Conference of 1863 and the Congress of 1864 but our government declined to sign the treaty on the ground that we were in the midst of war. Sporadic efforts were made to obtain its adoption up to 1877 when Miss Clara Barton headed a committee for this purpose. She had been through the Civil War with the Sanitary Commission, and through the Franco-Prussian War working with the Red Cross committees. In the latter she saw the Red Cross accomplish in four months what we had failed to accomplish in four years of civil war without it. She determined to try to make the American people understand the Red Cross and the treaty. She made an official presentation to President Hayes in 1877 and worked doggedly until the treaty was finally proclaimed by President Arthur on July 26, 1882. We were the 32nd nation to sign the treaty, the last civilized nation of that time. But we were the first to add to the scope of the organization, in addition to the relief of sufferings by war, those by "pestilence, famine, fire, flood, and other calamities, so great as to be regarded as national

in extent." Miss Barton was elected the first president of the American Association of the Red Cross.

Methods of organized first aid were developed largely in war experience, but its use in civil life has continued to be stressed more largely, until this now occupies possibly the major place. The first society devoted expressly to aiding in the recovering of drowning persons was established at Amsterdam in 1767. The Italian States followed in 1768 and the city of Paris in 1772. At London in 1774 was founded the Royal Humane Society. Its purpose was to "restore animation suspended by the effects of water, cold, convulsions, noxious vapors and lightning" and to prevent accidents at sea. The Life Saving Service of the City of New York is a volunteer organization established fifty years ago and still active.

Various organizations were started with first aid purposes, but most of them appear to have declined rapidly after the passing of their founders. In New York the Society for Instruction in First Aid to the Injured was founded in 1884. "Our object is clearly defined; we would aid those who have sustained bodily injury; would make them comfortable, and save life and limb, if possible, during that trying period when the physician is being sought for, perhaps in vain." From its list of officers it was apparently a lay organization with a Medical Director. Several editions of a first aid handbook were prepared. In the past twenty years its work has been taken over largely by the Red Cross.

The National Volunteer Emergency Service was incorporated in New York in 1900 by four doctors and twenty-three laymen, twelve of whom were ministers. It had a complete military set up from major-generals down with uniforms and purchased commissions. Its aims were theoretically good but from the last publication, which I found, dated 1908, it seemed to have accomplished little and apparently disappeared.

On February 9, 1903 a department known as "First Aid to the Injured" was established in the American National Red Cross. A section was added to the By-Laws, Dec. 8,

1903 which provided for its permanent operation,—the formation of classes of instruction in first aid, methods of treatment of the injured and other necessary provisions. Mr. Edward Howe, a member of the St. John Ambulance Association of England, was made superintendent of the new department.

The American Red Cross passed through a drastic reorganization during 1904. Clara Barton resigned as president after twenty-two years' service and the First Aid Department was discontinued. However it was reestablished in 1908.

The New England First Aid Association was organized in Boston, November 17, 1904. Classes of instruction were formed in police and fire departments, railroads, clubs and societies, including the Y.M.C.A. Six months' work showed that it was spreading rapidly over the whole country and the National First Aid Association of America was incorporated April 18, 1905. The founders seem to have been chiefly laymen. Miss Barton was elected president. Various local and state first aid societies associated themselves with it. The first city to accept this work in its schools and operate a first aid class among its teachers was the city of Everett, Mass. in 1907. The first corporation to see the great possibilities in giving their employees first aid instruction was the Simonds Manufacturing Co., at Fitchburg, Mass. From its annual reports this organization seems to have accomplished much in its first few years. However following the death of Miss Barton in 1912, when over ninety years of age, we find little record of it, although a magazine was published at least up until 1924.

Meanwhile after the First Aid Department had been discontinued by the American Red Cross in 1904, Mr. Edward Howe, who had been brought from England to supervise it, went to Chicago. Here he organized the American White Cross First Aid Society. Its objects were: "A national system of education in principles and methods of first aid emergency treatment of those injured by accident and organization of ambulance brigades and nursing corps for volunteer service." It does not seem

to have survived long but is interesting because on its board of directors were Frank Billings, J. B. Herrick, Nicholas Senn and John B. Murphy. Its Surgeon-in-Chief was Nicholas Senn.

The Pennsylvania Railroad commenced first aid on its lines in 1904. It installed a package of sterile dressings and stretchers in baggage cars, stations, shops, etc. Wooden splints were also added in some places.

The American Red Cross returned to this work in 1908 and in a few years became the recognized leader in the field of organizing and training in first aid. President William H. Taft said in 1909 that the Red Cross should "proceed with the organization of instruction in precaution against accident and first aid among the miners, railroad men, industrial employees, firemen, policemen, sailors, school teachers and the people generally." Major Charles Lynch, Medical Corps, U. S. Army, was detailed in 1909 by the Secretary of War to have charge of first aid for the Red Cross. In the previous year he had prepared a textbook on first aid for them. This went through a number of editions, including industrial, miners', police and firemen's, railroad, and women's. It was translated into many languages including Italian, Slovak, Polish, Lithuanian, Spanish, Portuguese and Chinese. In 1910 the Pullman Palace Car Company presented to the Red Cross a completely equipped first aid railway car from which instruction could be carried on along all main line railroads. This was devoted primarily to teaching first aid to railroad employees, but other people were also given instruction at the various stops. By the end of 1911 two cars were in operation and by 1918 over 1,000,000 persons had received instruction through these cars.

First aid training had progressed far enough so that at the Ninth International Conference of the Red Cross in 1911 an outdoor exhibition was given by the Army, Navy, Boy Scouts, railway trainmen, firemen and policemen. In 1912 a course of instruction was begun for the employees of the Bell Telephone Company of Pennsylvania. From this followed the nation wide training of telephone per-

sonnel which exists at present. Also in 1912 a first aid motion picture film was produced by the Edison Company. In 1914 water first aid (life-saving service) was inaugurated.

In 1915 courses of instruction in first aid were commenced among employees of the logging camps and saw mills in the State of Washington. In 1916 a start was made in adding the limestone, sandstone, slate, marble and granite quarries of the United States to this work. In 1920 intensified instruction was commenced in schools and colleges, and among policemen and firemen, soldiers and sailors, and state departments of labor and industry. Between 1910 and 1922, 164,121 persons completed a first aid course and received a Red Cross Certificate. In 1923 forest rangers and employees on reclamation projects were added to the groups instructed. In the fiscal year ending June 30, 1936, 222,693 First Aid Certificates were issued. The courses were taught by 9,662 instructors, 6,490 of whom were lay instructors and 3,172 were professional or doctors of medicine. Over 1,170,000 certificates have been issued since 1910.

In 1935 two campaigns were started,—one against Home and Farm Accidents and the other for Highway Emergency First Aid Stations. The ideal of the latter is to help in the problem of motor accidents along rural highways. The individual stations are under supervision of the local Red Cross Chapters. After sixteen months' effort on October 1, 1936 there were 1149 stations in operation in 47 states; 3466 more stations had been definitely promised by the chapters. The chief delay in these is obtaining trained personnel. The Red Cross has requested the assistance of the medical profession in training this personnel. In many places this cooperation has been obtained with difficulty, if at all. Fixed traction splints are part of the equipment and inasmuch as the Red Cross commenced to train its instructors in this only three years ago, the help of the medical profession is needed badly. The major difficulty is that so many of the medical profession know nothing about it.

In 1936 a plan for Mobile Emergency First Aid Units was issued and it is expected that some of these will be in operation soon. A unit will consist of one or more men attached to a work truck, automobile or motor-cycle in connection with their regular employment and who have been trained in Red Cross First Aid. They must have the permission of their organization to give emergency first aid care to the victims of highway accidents as they may come upon them in the course of their regular duties. This will concern particularly state police and state highway departments and public utility companies. They have no direct connection with the fixed Highway Emergency First Aid stations but will supplement their work in first aid without transportation.

Instruction in first aid is given by the United States Army, Navy and Coast Guard Service to its personnel. As a result of the proved efficiency and value of the Red Cross training it is also given by the following organizations, among others:

U. S. Public Health Service
U. S. Bureau of Mines
American Red Cross
National Safety Council
Boy Scouts
Girl Scouts
American Public Health Association
American Railway Association
American Gas Association
American Petroleum Institute
Edison Electric Institute
Many individual industries
State and local police departments
Fire departments

The National Safety Council was organized in 1913. Its efforts have been directed particularly toward accident prevention, where it has rendered outstanding service. It has also contributed considerably to first aid work by showing the gravity of the problem through its gathering and publishing of accident statistics, in most striking form;

by the publication and distribution to its members of about one hundred different pamphlets; by encouraging first aid training, as given by the American Red Cross and the United States Bureau of Mines, throughout all industry; and offering medals as awards in local, state and national first aid contests. It also awards a President's Medal to anyone who successfully applies the Schäfer Prone Pressure method of resuscitation in any emergency.

In this country education of the miners in first aid was first taken up systematically in the Pennsylvania anthracite mining district at Jermyn, Pa. in 1899, later spreading to Alabama and Indiana. When the Bureau of Mines of the Department of the Interior began its nation-wide campaign of instructing miners in the use of mine rescue apparatus and in methods of first aid (about 1913) the American Red Cross turned over that part of its industrial training work to the Bureau of Mines. This had been carried to a high point of efficiency by Dr. M. J. Shields since 1909. This arrangement has been continued since, the Red Cross cooperating in the preparation of first aid manuals in 1916 and 1921. Up to September 1, 1929, approximately 395,000 men had been instructed in these methods. The latest revision of the Manual of First Aid Instruction was made in 1930 entirely by first aid instructors and surgeons connected with the Bureau of Mines, with the idea of standardizing the methods for all industries it serves. The Bureau of Mines maintains eleven mine safety stations in stationary buildings and eleven in movable rescue cars. These are located in nineteen states and each has a first aid instructor to give training and demonstration.

The Boy Scouts of America, with a present membership of over one million, have an important place in first aid. Instruction in this for Scouts and Scout leaders was commenced in 1910. Cooperation with the Red Cross has been maintained since that time. Knowledge of elementary first aid is one of the requirements to become a Second Class Scout. The extent of this training must be considerably widened before one may become a First Class Scout.

One cannot attain to the rank of Life Scout or Eagle Scout unless one has qualified for a certain number of merit badges. In each case one of these must be a merit badge in first aid. Between 1911 and August 1936 over 275,000 merit badges in first aid were awarded. There is also an advanced course in first aid which has been taken by 1488 scout leaders during the past five years. It is stated authoritatively that the number of instances in which first aid training is put to practical use by Boy Scouts runs very high. Every troop is urged to have on hand a set of fixed traction splints for instruction and emergency purposes.

Recently the American Relief Administration Children's Fund, Inc., has made available to the Boy Scouts a sum of money to be used over a five year period for the aggressive promotion of the Boy Scout health and safety program. First aid instruction has a prominent place in their five year objective.

The Girl Scouts, with a membership of over 300,000 also give good first aid instruction. The Red Cross has supervised their work since 1913.

I wish to call your attention to a few recognized first aid methods, as examples, about which some practitioners might know more with advantage. The Prone Pressure Method of artificial respiration was brought out by Sir Edward Sharpey Schäfer in 1903. A standard technique of applying it was approved in 1927 by the American Gas Association, American Red Cross, American Telephone and Telegraph Company, Bethlehem Steel Corporation, National Electric Light Association, National Safety Council, Bureau of Medicine and Surgery, Navy Department; office of the Surgeon General, War Department; U. S. Bureau of Mines; U. S. Bureau of Standards; and U. S. Public Health Service. It is recognized as the most efficient and safest method. Yet one still usually finds it side by side with the Sylvester method in many medical text-books. I would wager that more medical men in this audience have made use of the Sylvester than the Schäfer method. Recently there has been added the Holgar-

Nielson method from Denmark. Is there any reason why a layman should not ask your opinion of it? I was asked mine and had to admit that I had never heard of it. I looked it up and found that I had to depend on laymen to inform me about it. It should not be recommended.

You are fortunate if you have a text-book of surgery which tells you the modern treatment of snake bite. Yet if you have ever practiced in the country you have seen patients who have been, or more probably think they have been, bitten by a snake. A tourniquet to increase bleeding, a deep cross cut over the fang marks, but then, instead of the application of a caustic, as formerly, suction is continued for at least one-half hour with the mouth or a breast pump.

The treatment of sunstroke and heat exhaustion are entirely different. For us to treat both with cold water or ice may kill one of them. First aid men are well aware of this, but I did not get it out of medical school.

These are merely examples of methods of care which are better known frequently by the first aider than the doctor. The duty of the first-aider ends where the physician begins. It would be unfortunate if we arrived while these treatments were still under way and we were not sufficiently acquainted with them to continue. In 1934 drowning caused 7,326 deaths, poisonous gas 1,695, electric shock 723, snake bite 147, and excessive heat 3,250. There are plenty of lives to be saved by both the physician and the first-aider.

The tannic acid method of treating burns was introduced about 1925 by Davidson. Anyone who has had opportunity to use it gladly agrees that it has many advantages over any treatment previously used. A good result is jeopardized if any kind of grease or ointment is applied first. The American Red Cross in the 1933 edition of its Text-Book was already recommending tannic acid in first aid and explaining the folly of greases. It will take a long time for the many texts which follow the Red Cross to be changed and still longer for the idea to reach the public generally. Sometimes I think that the period is even longer

before a new, but admittedly correct, idea is adopted by the majority of the medical profession. The first-aider is anxious for our advice as to new and improved methods if we can make them practical. The layman wishes to bring the injured to the physician in better condition for the doctor's treatment. It is unfortunate that so few physicians have maintained an interest in first aid methods that hardly any of our profession are really of value even in a consulting capacity.

Hemorrhage and fractures are the most important two conditions which confront the first-aider. Of these, fractures are many times more frequent, probably occurring about a million and a half times a year in this country.

In major fractures the initial care given at the place of accident and the method of transportation influence the ultimate good or poor result. Death, permanent disability, loss of earning power and dependence on the community may be the price of lack of knowledge of, or attention to, the necessary details of what should be done at this critical time.

At the instant a bone is broken, nature tries to protect the part from more injury. If there is any displacement of the fragments the muscles shorten causing the fragments to ride by one another resulting in the only possible natural splinting. Such splinting is fairly effective while the part is at rest, but does not offer sufficient protection while moving the part or the patient. At the time of the original injury, or as a result of overriding of the fragments, the surrounding soft parts are damaged as well as the bone. The soft parts concerned are periosteum, muscle, blood vessels, nerves, connective tissue and fat. In transporting without effective splinting the fragments are liable to be moved about causing more, often irreparable, damage to the soft parts. Not only may large blood vessels or nerves be torn but such motion causes pain, with its resultant increase in shock. Moreover in compound fractures motion of the fragments adds the risk of spreading infection through tissues not exposed to infection at the time of the original trauma.

A bone may be broken in an accident and no displacement of the fragments occur. Suppose a person is allowed to bear weight on such an injured leg or to be moved without the proper splinting, displacement of bone fragments may occur and any of the unfortunate results mentioned above may follow. Not infrequently a closed fracture will become compound, making the result as to life, limb and permanent disability much more serious than if the fracture had remained closed.

All of these occurrences can be prevented if sufficient pull is applied to the part to overcome the muscular contraction and thus to preserve the original length of the bone. This is easy if applied immediately after injury before the muscles have had an opportunity to become fixed in spasm. Early reduction is facilitated and the length of disability in such cases is decreased. Late reductions are lamentable and difficult and are often followed by long disability.

The advantages of proper transportation are:

1. For the patient it decreases the danger of further injury, increases comfort and lessens shock.

2. For the surgeon it simplifies reduction.

3. For the hospital as well as the patient it shortens his stay by promoting earlier union and lessening the danger of non-union.

4. From the economic side, the expense to industry is diminished because the injured man spends fewer days in the hospital and returns to work more quickly.

The majority of the ambulances going to the place of accident are manned by laymen. Since most of the initial care will be rendered by lay persons the physician must be acquainted with the best methods in order to guide the general policy and instruct individuals. Since the injured will usually be seen first by the physician at office or hospital, the physician should arrange in his community that approved methods of care and transportation are employed in order to obtain the best result in the least time. This initial care will continue to be rendered by the lay public. It does not constitute treatment, but if properly given

will make the professional treatment simple and more effective. There can be no clash of interest between the physician and the lay public in this matter.

Principles of Initial Care:

1. If suspicious that a fracture is present, render care as a fracture.
2. Combat any shock.
3. Avoid all unnecessary handling.
4. Protect any existing wound by the best means available.
5. Splint effectively, wherever found, before transporting.
6. Transport carefully.

The injured person should first be examined rapidly and gently to determine whether he is seriously hurt. The clothing does not need to be removed. In examining an injured person keep him thoroughly covered except the part actually being examined. One should depend on local pain, loss of function, deformity and malposition of the limb for the emergency diagnosis of fracture and should not try to obtain crepitus or false point of motion. If the patient thinks that he felt a bone "snap," for emergency purposes, we should be satisfied with his history and not attempt to prove the diagnosis on the street.

The saving of life comes first, the saving of limb second. If the patient is in severe shock this demands treatment before anything is done for the injured limb. There is no use in splinting a limb carefully while neglecting to treat shock from which the patient may be dying. On the other hand traction on an extremity may be an effective means of combating shock. If a physician is present morphine is the best treatment for shock. Sufficient morphine should be given to relieve pain and thereby quiet the patient's restlessness. The body heat must be maintained by sufficient extra covering and the use of external heat.

If a wound is suspected, the seams of the clothing are split to expose the region. If a wound is found, which may possibly connect with a fracture, it should not be washed out. Fresh mild tincture of iodine, if available, may be

applied to the surrounding skin and projecting bone. This should not be applied to exposed soft parts, unless of small extent, since it causes pain. A sterile compress should then be placed over the wound. Bleeding should be stopped. It is rare that this cannot be done with a firm compression bandage.

Tourniquets should not be used until compression of the wound has proved of no avail. Deaths have been caused by an improperly applied tourniquet which allows some arterial blood to enter the part and only shuts off the venous return. It is common to see all bleeding stop as soon as a tourniquet is removed.

If a tourniquet must be used it should be loosened every half hour to allow blood to return to the part distal to the tourniquet. If a tourniquet is applied too tightly or for too long a period gangrene, paralysis from nerve pressure, or lowered resistance to infection may result.

Do not attempt to replace the fragments in a compound fracture with projecting bone. If the bone disappears beneath the skin in the course of the application of traction, this should not cause anxiety. The patient must be operated on in any case to clean the wound. It is important to have word accompany the patient that the bone has been exposed in order to guide the physician treating the patient. Traction is more necessary in compound than in closed fractures, to lessen the danger of spreading contamination in the soft parts and to diminish the greater shock.

The patient should not be picked up hastily and dumped into the first automobile and rushed to a doctor's office or hospital. It is far better to cover him adequately and let him lie on the ground where he was found, until splints can be put on, and then move him in an ambulance. If it is necessary to change his position at all before splinting, in the instance of an extremity fracture, a continuous pull should be exerted by hand on the injured part while he is being moved.

The only effective and advisable method for transporting patients with fractures of the long bones of either upper

or lower extremities is in some form of fixed traction. This requires the use of a splint of the Thomas type. Fixed traction is that in which the pull is exerted from fixed points above and below the fracture so that the pull remains the same whatever the position of limb or splint. Overriding is characteristic of these fractures and there can be no generally effective immobilization without traction. In addition traction relieves pain and shock and prevents further damage in transportation. The fixed traction splint should be applied if there is any possibility of fracture between the hip joint and the foot or between the shoulder joint and the middle of the forearm, no matter whether the injuries are closed or compound.

The full ring Thomas splint can be used on either upper or lower extremity. More generally applicable and advisable splints of the Thomas type are the Murray-Jones hinged arm splint for the upper extremity and the Keller-Blake hinged half-ring splint for the lower extremity. These splints should be applied wherever the patient is found before moving him.

There are certain standards that are necessary in the application of this general method. It does not make any difference what particular procedure is used so long as one appreciates what it is sought to accomplish.

In the use of traction there are six requirements:

1. There must be some adequate form of hitch, and it is necessary to protect the part beneath the hitch so that it will not be injured.

2. The application of a traction hitch above the ankle or the wrist.

3. There must be some means of increasing traction so that the desired pull is obtained.

4. The extremity being in traction, it must be supported from below. One must not depend merely on traction for the entire support of the limb.

5. Lateral movements must be prevented.

6. The whole splint must be suspended in such manner that the heel will never be pressed upon.

In hospital practice a traction splint should be applied immediately in the emergency room, if it has not been done before. The patient is transported to the X-ray room and ward with traction on. The removal of the patient's clothes is supervised so that if splint traction has temporarily to be loosened traction is maintained manually until splint traction can be reapplied. The traction splint is kept on during the trip to the operating room and until the patient is in the care of a surgeon.

If the mechanism of injury is such that a fracture of the spine might have been produced, transport as a fracture, even though no objective signs are made out in a cursory examination. Death or permanent disability result more commonly from improper transportation of fracture of the spine, sometimes unrecognized, than from any other injury. Pinching the skin and trying slight active motions of the extremities from below upward will determine rapidly whether or not there is marked cord injury.

In patients with possible fractures of the dorsal or lumbar regions the underlying principle of hyperextension should be observed in any moving and in transferring them from the site of accident. If found in any other position, the patient should be slowly and evenly rolled onto his face, with a sheet or blanket beneath him if one is available. If neither of these is handy and two other persons only are present the patient may be moved to the splint with one person lifting the shoulders and the other the thighs, the body being in the face down position. With sheet or blanket available the injured person is carried to the splint in the prone position in the improvised hammock with one person holding the sheet at either end. If three to six competently trained men are present the patient may be lifted with the entire body kept in a straight line without any twisting and placed face downward on the splint. Misdirected attempts to help may cause further damage.

The ideal position for transportation in possible fractures of the dorsal and lumbar regions is face downward on a rigid support. Ordinary stretchers do not answer the purpose, but only those in which the side bars are held

rigidly apart. In the absence of this, a wide board or a door may be used. The so called "ladder" splint is the simplest and most effective. It consists of two long boards fastened together by three cross pieces, either nailed or tied on. Each board is padded with a blanket or other material. The patient should be carefully tied in position so that jolts will not cause any movement. If paralysis is thought to be present all wrinkles in the clothing and hard objects in the pockets should be removed to prevent the patient lying on them with the probability of developing pressure sores later.

In possible fractures of the cervical vertebrae the head and trunk should be kept in the same position as found during movement to the rigid stretcher, etc. In addition to the usual body ties, rigid support, such as bags of sand should be placed either side of the head to prevent rotation.

Miss Clara Barton, first president of the American Association of the Red Cross, said in an address in 1907:

"When one shall know, not only how to give, but how to do, and possibly prevent; when every man may understand his wounded brother's need and how to meet it; when the mother shall know how to save her child in accident; when even the child shall be taught to lessen the pain or to save the life of its playmate—then comes the real help.

"Think, friends, what it would be,—yes what it will be, when all the rough, sturdy men of danger, living every hour in the face of accident and death, shall know what to do in the moment for his writhing companion in toil; when the homes—the children in the streets and in the schools —shall all possess the knowledge which this method of human beneficence teaches—this is First Aid—this is what it stands for—the lessons which it inculcates and its faithful apostles teach."

In considering "Trauma and Occupational Hazard" it is necessary that we remember the important part played by first aid. It behooves us to know at least as much about it as the hundreds of thousands of trained laymen. We should take pride in being able to advise them in their methods and cooperate in making new medical treatments

practically available to them. At the same time we must aim to keep the general medical profession abreast of the knowledge gained by experience in first aid work. The initial care of the injured is a tremendous public health problem in which the majority of the medical profession has displayed little interest and exerted almost no influence. Lay organizations are doing excellent work, but they are asking for more assistance from the profession than they have been receiving. Each of us has it within his power to remedy this.

I am grateful for assistance rendered to me in the preparation of this article by Dr. Archibald Malloch, Librarian of the New York Academy of Medicine; Mr. Harold F. Enlows, Director First Aid and Life Saving, American Red Cross; Mr. W. H. Cameron, Managing Director, National Safety Council; Captain Fred C. Mills, Director Health and Safety Service, Boy Scouts of America; Dr. Hubley R. Owen, Chief Surgeon, Department of Public Safety, Philadelphia.

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1. ERYTHROBLASTOSIS FETALIS AS A CAUSE OF INFANTILE MORTALITY

CARL T. JAVERT

Erythroblastosis caused 5 per cent of the neonatal deaths in 1936 at the Woman's Clinic of the New York Hospital. It is believed that the mortality rate can be lowered by diagnosis in the unborn child, proper management of labor, and prompt treatment.

Blood formation in the embryo was reviewed. Erythroblastosis may be due to a deficiency in the principle necessary for red cell maturation. Pathologically, the prolongation of extra-medullary hemopoiesis must exceed that of premature infants.

Maternal and infantile records of ten cases were presented, including laboratory and autopsy data. The mortality rate was 70 per cent. Treatment consisted of blood transfusions. The three surviving infants received nine, seven, four transfusions respectively. The nucleated red cells disappeared within the first two weeks of life.

The diagnosis was based on the clinical picture and the presence of erythroblasts in the blood smear, and in the fetal vessels of the placenta. Prematurity, sepsis, congenital syphilis, hemorrhagic disease, intracranial hemorrhage, congenital heart disease, malformation of the biliary system, aplastic anemia, and leukemia were ruled out.

Erythroblastosis runs part of its course intra-utero. Students of neonatology can base a presumptive diagnosis on the racial aspects, familial jaundice, hydramnios, diminished or absent fetal activity, fetal distress, and amber colored amniotic fluid.

2. PREVENTION AND CONTROL OF PUERPERAL INFECTION DUE TO THE BETA HEMOLYTIC STREPTOCOCCUS*

R. GORDON DOUGLAS

A resumé of measures preventing all kinds of puerperal infections should include the following:

> Strictest possible aseptic surgical technique; limitation of pelvic examinations and operative interference; improvement of the general condition of the patient and employment of prophylactic transfusions when indicated.

The most common source of Group A hemolytic streptococci is the upper respiratory passages. It has also been found that these organisms are frequently present during acute follicular tonsillitis and scarlatina.

* This paper will be published in the February number of the *American Journal of Surgery*.

Their frequency is also increased during even mild upper respiratory infections and indeed may be found sometimes in normal healthy individuals. Strictest possible precautions are indicated to prevent the spread of these organisms. Such measures should include adequate masking of all individuals coming in contact with the parturient women, and requiring attendants, both professional and non-professional, to desist from caring for patients when they are suffering from upper respiratory infections. Negative nose and throat cultures should be obtained before such individuals return to duty. Isolation of morbid patients from the afebrile group should be carried out. Diagnostic and therapeutic procedures should be carried out after the isolation is established.

In the New York Lying-In Hospital exhaustive precautions have been taken to prevent this type of puerperal infection. In 14,176 consecutive deliveries of full term and premature infants 1,132 had bacteriological studies of the lochia. The Beta hemolytic streptococcus was isolated on only eleven occasions, namely, in less than 1 per cent of the morbid patients.

3. MANAGEMENT OF BREECH*

HERVEY C. WILLIAMSON

The ideal method of the management of a breech presentation is to convert the presenting breech into a vertex by external manipulation whenever this is possible. Cesarean section has no place in the management of this presentation unless there is some other indication. Conservative management of the first stage of labor is most essential. Be prepared for difficulties at the actual delivery of a breech. Deliver the baby with as little manipulation as is possible. Forceps applied to the aftercoming head is advantageous especially in the primipara. Breech extraction is nearly always difficult and should not be attempted unless there is an absolute indication.

4. THE SIGNIFICANCE OF THE BLOOD LOSS DURING THE THIRD STAGE OF LABOR

JOHN B. PASTORE

A study of the blood loss in 2,370 cases of vaginal deliveries was presented. Special reference of puerperal infection in relation to the blood loss was emphasized. The importance of accurately measuring the blood loss was shown in this investigation.

It was found that the blood loss is of greater value when expressed in terms of body weight, and on that basis 1.0 per cent or more blood loss should be considered a postpartum hemorrhage. The incidence of puerperal infection as well as total morbidity increased with the blood loss. This increase is not due to the amount lost but rather to a decrease in cell volume on the third postpartum day. The incidence of

*This paper will be published in the February number of the *American Journal of Surgery.*

infection rose from 4.5 per cent to 31.0 per cent when the cell volume dropped from 40 per cent to less than 30 per cent.

A graph was presented to show the change in cell volume following known blood losses, and from this it was possible to calculate at the time of delivery what the cell volume would be on the third postpartum day. Dr. Pastore felt that this was very important because it enables him to give transfusions to patients who will later develop anemia. The transfusions are given immediately after delivery in order to decrease the incidence of infection and the period of hospitalization, and to eliminate postpartum anemia.

Two practical charts were presented to compute the per cent blood loss and the cell volume for the third postpartum day. The author felt that the routine Sahli hemoglobin determination was inaccurate and unreliable. Changes in the cell volume are also indicative of changes in the total blood volume and are therefore valuable in the study of the toxemias of pregnancy. Careful studies of the blood will offer an explanation for some of the cases of so-called obstetrical shock.

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5. THE EVALUATION OF MALE FERTILITY

(With Moving Picture Demonstration)

WILLIAM H. CARY

The important factors in an efficient gynecological examination were briefly reviewed preceding a moving picture demonstration of the characteristics of the normal semen and various types of deficiency. The importance of heredity, adolescence, femininity and pelvic examination focused upon function rather than pathology was stressed. The speaker indicated that in studying an infertile union, interpretation of the gynecological findings often was dependent upon accurate evaluation of the reproductive vigor of the male. A union may be sterile without the term being applicable to either partner. Instances in which gynecological patients with gross anatomical lesions became pregnant after improvement of fertility in the male were cited. The purpose of the film was to stimulate and elucidate competent appraisal of fertility in the male supplemented by careful physical study of the patient. The moving picture also demonstrated various degrees of deficiency, method of sperm count, high magnification of abnormal forms, stained and unstained uterine secretions with spermigration in progress, differences in sperm cell behavior in the presence of inorganic and organic substances, and sperm cell invasion of the ovum of the star-fish.

LIBRARY NOTES

WANTED BY THE LIBRARY

In order to complete two sets of the *Index-catalogue* of the Surgeon General's Office, the following out-of-print volumes are needed:

Series 2, vol. 1, 2.
Series 3, vol. 7, 8, 9
(2 copies of each), and vol. 10.

If any of our readers has one or more of the above to spare, please communicate with the Librarian.

A SELECTED LIST OF PERIODICALS ADDED IN 1936

New Journals

Actabiotheoretica (Geschriften van de Prof. Dr. Jan van der Hoeven Stichting voor Theoretische Biologie van Dier en Mensch, verbonden aan de Universiteit te Leiden, Series A).
Leiden, vol 1, no. ½, 1935.

Anales de cirugía.
Rosario, Argentina, vol. 1, no. 1, June 1935.

Annals of science; a quarterly review of the history of science since the Renaissance.
London, vol. 1, no. 1, Jan. 15, 1936.

Arbeitsmedizin; Abhandlungen über Berufskrankheiten und deren Verhütung.
Leipzig, no. 1, 1935.

Archives of speech.
[Iowa City, Ia.], vol. 1, no. 2, March 1936.

Bulletin de l'Académie de Médecine de Roumanie.
Paris, vol. 1, no. 1, Jan. 1936.

Bulletin of the Los Angeles Neurological Society.
Los Angeles, vol, 1, no. 1, March 1936.

Bulletin de la Société de Psychiatrie de Bucarest.
Bucharest, vol. 1, no. 1, 1936.

Child; monthly news summary (Children's Bureau, U. S. Department of Labor).
Washington, vol. 1, no. 1, July 1936.

Deutsche Militärarzt.
Berlin, vol. 1, no. 1, April 1936.

Enzymologia.
The Hague, vol. 1, no. 1, June 30, 1936.

Ernährung; Zeitschrift für das gesamte Ernährungswesen in Forschung, Lehre und Praxis.
Leipzig, vol. 1, no. 1, March 1936.
Continuation of Zeitschrift für Ernährung.

Food research.
Champaign, Ill., vol. 1, no. 1, Jan.-Feb. 1936.

Health officer; a digest of current health information (Office of Public Health Education, U.S. Public Health Service).
Washington, vol. 1, no. 1, May 1936.

Indian Journal of venereal diseases.
Bombay, vol. 1, no. 1, March 1935.

International journal of individual psychology.
Chicago, vol. 1, no. 1, April 1935.

Japanese journal of medical sciences, XI., Gynecology and tocology.
Tokyo, vol. 1, no. 1, Feb. 1936.

Journal of the Connecticut State Medical Society.
Hartford, vol. 1, no. 1, Aug. 1936.
Supersedes the society's Proceedings.

Journal of organic chemistry.
Baltimore, vol. 1, no. 1, March 1936.

Journal of psychology.
Worcester, Mass., vol. 1, 1935/36.

Journal of speech disorders (American Speech Correction Association).
Columbus, O., vol. 1, no. 1, March 1936.

Laval médical (Société Médicale des Hôpitaux Universitaires de Quebec).
Quebec, vol. 1, no. 1, March 1936.
Continuation of the society's Bulletin.

Luftfahrtmedizin.
Berlin, vol. 1, no. 1, 1936.

Medical classics.
Baltimore, vol. 1, no. 1, Sept. 1936.

Medicina de hoy.
Habana, vol. 1, no. 1, Feb. 1936.

National birth control news (National Committee on Federal Legislation for Birth Control).
Washington, vol 1, no. 1, Nov. 1936.

Osiris; studies on the history and philosophy of science, and on the history of learning and culture.
Bruges, vol. 1, Jan. 1936.

Psiquiatría y criminología.
Buenos Aires, vol. 1, no. ½, Jan.-April 1936.
Supersedes Revista de criminología, psiquiatría y medicina legal.

Publicaciones médicas.
Buenos Aires, vol. 2, no. 2, April 1936.

Quarterly review (New York City Cancer Committee).
New York, vol. 1, no. 1, April 1936.

Revista argentina de neurología y psiquiatría.
Rosario, vol. 1, no. 1, Feb. 1935.

Revista de gastro-enterología de Mexico (Asociación Mexicana de Gastro-enterología).
Mexico, vol. 1, no. 5, May- June 1936.

Revista de parasitología, clínica y laboratorio.
Habana, vol. 1, no. 2, Nov.-Dec. 1935.

Revista de tisiología práctica.
Montevideo, vol. 2, no. 2, July 1936.

Revue de sensibilisation et d'immuno-biologie clinique.
Bucharest, vol. 1, no. 1, March 1935.

Rivista di chirurgia.
Napoli, vol. 1, no. 1, Feb. 1935.

Speech (British Society of Speech Therapists).
London, vol. 1, no. 1, July 1935.

Statistical research memoirs (Department of Statistics, University of London, University College).
London, vol. 1, June 1936.

Transactions of the Kansas City Academy of Medicine.
Kansas City, 1933/35.

Zentralblatt für Neurochirurgie; Beihefte zum Zentralblatt für Chirurgie.
Leipzig, vol 1, no. 1, Aug. 1936.

Other Journals Now Being Received Regularly:

Acta biologiae experimentalis. Warsaw.

American journal of sociology. Chicago.

Anales de cirugía. Habana.

Annales homéopathiques de l'Hôpital Saint-Jacques. Paris.

Annali dell' Ospedale Psichiatrico di Perugia. Perugia.

Archivio dello Istituto Biochimico Italiano. Milano.

Bollettino delle malattie dell' orecchio, della gola, del naso . . . Firenze.

Bollettino della Società Medico-Chirurgica. Pavia.

Bulletin, American College of Radiology. Chicago.

Bulletin of the Naval Medical Association. Tokyo.

Bulletin der Schweiz. Vereinigung für Krebsbekämpfung. Bern.

Bulletin des sciences pharmacologiques. Paris.

Bulletin de la Société Médico-Chirurgicale de l'Indochine. Hanoi.

Cancer, Edinburgh (Cancer Control Organization for Edinburgh and South-East Scotland). Edinburgh.

Duodecim; lääketieteellinen aikakauskirja. Helsinki.

Homœpathic recorder (International Hahnemannian Association). Glendale, Cal.

Journal of the Association of Medical Women in India. Calcutta.

Journal belge de radiologie. Bruxelles.

Journal of the Christian Medical Association of India, Burma and Ceylon. Mysore City.

Journal of Severance Union Medical College. Seoul, Korea, Japan.

Kyoto-ikadaigaku-zasshi (Mitteilungen aus der Medizinischen Akademie zu Kioto). Kyoto.

Malayan medical journal. Singapore.

Medicina; revista mensual de ciencias médicas. Madrid.

Mitteilungen der Medizinischen Gesellschaft zu Tokyo. Tokyo.

Monatsschrift für Kriminalpsychologie und Strafrechtsreform. München.

Monitore zoologico italiano. Firenze.

Nordisk hygieinisk tidsskrift. Göteborg.
Ospedale psichiatrico; rivista di psichiatria, neurologia e scienze affini. Napoli.
Pratica pediatrica. Milano.
Przeglad dermatologiczny. Warsaw.
Schizofrenie. Racconigi.
Society for Research in Child Development. Child development abstracts and bibliography. Washington.
Tidsskrift vor den norske laegeforening. Oslo.
Tratamientos actuales. Madrid.
Travail humain. Paris.

RECENT ACCESSIONS

("Possession does not imply approval")

Bailey, H. & Matheson, N. M. Recent advances in genito-urinary surgery. London, Churchill, 1936, 213 p.
Bell, V. M. Chemistry used in foods and nutrition courses. Columbus, Ohio State Univ., [1936], 84 p.
Bickerton, T. H. A medical history of Liverpool from the earliest days to the year 1920. London, Murray, 1936, 313 p.
Biltz, J. H. Die neuere Harnsäurechemie. Leipzig, Barth, 1936, 164 p.
Bisch, L. E. Be glad you're neurotic. N. Y., Whittlesey, [1936], 201 p.
Bomskov, C. Methodik der Hormonforschung. Leipzig, Thieme, 1937 [1936], vol. 1.
Boyle, H. H. Principles and practice of applied dental aesthetics. London, Kimpton, 1936, 238 p.
Brugsch, T. Ganzheitsproblematik in der Medizin. Berlin, Urban, 1936, 136 p.
Brunschwig, L. A study of some personality aspects of deaf children. N. Y., Teachers College, 1936, 143 p.
Bryan, W. A. Administrative psychiatry. N. Y., Norton, [1936], 349 p.
Cannon, W. B. Digestion and health. N. Y., Norton, 1936, 160 p.
Carver, A. E. A.; Hunt, T. C. & Willcox, (Sir) W. H. Alcoholism in general practice. London, Constable, 1936, 131 p.
Chopra, R. N. A handbook of tropical therapeutics. Calcutta, Art Press, 1936, 1748 p.

Corwin, E. H. L. and Sturges, G. E. Opportunities for the medical education of negroes.
N. Y., Scribner, 1936, 293 p.

Currie, J. R. [et al.] Manual of public health laboratory practice.
Edinburgh, Livingstone, 1936, 378 p.

Deans, A. G. and Austin, A. L. The history of the Farrand training school for nurses.
Detroit, Alumnae Assoc. of the Farrand Training School, 1936, 236 p.

Favourite prescriptions, edited by Sir H. Rolleston and A. A. Moncrieff.
[London], Eyre, [1936?], 227 p.

Glasstone, S. Recent advances in general chemistry.
London, Churchill, 1936, 430 p.

Glasstone, S. Recent advances in physical chemistry. 3.ed.
London, Churchill, 1936, 477 p.

Habbe, S. Personality adjustments of adolescent boys with impaired hearing.
N. Y., Teachers College, 1936, 85 p.

Hammar, J. A. Die normal-morphologische Thymusforschung im letzten Vierteljahrhundert.
Leipzig, Barth, 1936, 453 p.

Hirschman, L. J. Synopsis of ano-rectal diseases.
St. Louis, Mosby, 1937 [1936], 288 p.

Hiscock, I. V. District health administration.
Lancaster, Science Press, 1936, 115 p.

Israeli, N. Abnormal personality and time.
N. Y., [Science Press], 1936, 123 p.

Jensen, P. B. Growth hormones in plants.
N. Y., McGraw-Hill, 1936, 268 p.

Kitchin, D. H. Legal problems in medical practice.
London, Arnold, 1936, 232 p.

Klussmann, W. Das Ärztebüchlein, eine Sammlung besinnlicher Worte für die Feierstunde des Arztes.
Leipzig, Thieme, 1937, 199 p.

Lautman, M. F. Arthritis and rheumatic disease.
N. Y., Whittlesey, [1936], 177 p.

Lawrie, M. Nature hits back.
London, Methuen, [1936], 180 p.

Leonhard, K. Die defektschizophrenen Krankheitsbilder.
Leipzig, Thieme, 1936, 134 p.

Linser, P. and Vohwinkel, K. H. Moderne Therapie der Varicen, Hämorrhoiden und Varicocele.
Stuttgart, Enke, 1936, 97 p.

Louttit, C. M. Clinical psychology, a handbook of children's behavior problems.
N. Y., Harper, 1936, 695 p.

Lund, F. B. Greek medicine.
N. Y., Hoeber, 1936, 161 p.

Lyster, R. A. The hygiene of the school. [2.ed.]
London, Univ. Tutorial Press, [1936], 368 p.

McKay, W. J. S. Appendicitis: when and how to operate.
Sydney, Angus, 1936, 260 p.

Mayhew, L. M. Miracle healing.
London, Rider, [1936], 128 p.

Meachen, G. N. A short history of tuberculosis.
London, Bale, 1936, 105 p.

Mendelsohn, S. F. Mental healing in Judaism; its relationship to Christian science and psychoanalysis.
Chic., Jewish Gift Shop, [1936], 64 p.

Modern urology in original contributions by American authors. Edited by H. Cabot. 3.ed.
Phil., Lea, [1936], 2 v.

Morgan, J. J. B. The psychology of the unadjusted school child. Rev. ed.
N. Y., Macmillan, 1936, 339 p.

Müller, E. Ernährung und Behandlung des Kindes.
Stuttgart, Enke, 1936, 600 p.

Newsholme, (Sir) A. The last thirty years in public health.
London, Allen, [1936], 410 p.

Paraf, J. L'immunité au cours de la tuberculose.
Paris, Masson, 1936, 139 p.

Parker, G. H. Color changes of animals in relation to nervous activity.
Phil., Univ. of Penn. Press, 1936, 74 p.

Preventing crime; a symposium, edited by S. and E. Glueck.
N. Y., McGraw-Hill, 1936, 509 p.

Quinn, E. L. and Jones, C. L. Carbon dioxide.
N. Y., Reinhold, 1936, 294 p.

St. Johnston, (Sir) T. R. Strange places and strange peoples, or, life in the colonial service.
London, Hutchinson, [1936], 286 p.

Scritti in onore del Prof. Angelo Ceconi.
Torino, Minerva Medica, 1936, 407 p.

Shafer, H. B. The American medical profession, 1783 to 1850.
N. Y., Columbia Univ. Press, 1936, 271 p.

Von Oettingen, W. F. The therapeutic agents of the pyrrole and pyridine group.
Ann Arbor, Edwards, 1936, 258 p.

Ware, J. C. The chemistry of the colloidal state. 2.ed.
N. Y., Wiley, 1936, 334 p.

Wesson, M. B. and Ruggles, H. E. Urological roentgenology.
Phil., Lea, 1936, 269 p.

PROCEEDINGS OF ACADEMY MEETINGS

JANUARY

ANNUAL MEETING

January 7

I. EXECUTIVE SESSION—a. Reading of the Minutes; b. Report of the Nominating Committee; c. Election of Members; d. Presentation of diplomas.

II. PRESENTATION OF ANNUAL REPORTS—(read by title)—The Council, The Trustees, The Treasurer, Committees.

III. PAPERS OF THE EVENING—a. *Address of the Retiring President*: Recent Activities of The New York Academy of Medicine, Eugene H. Pool; b. *Address of the Incoming President*: Ideals in Medicine, James Alexander Miller; c. Medicine and the State, Hon. Thomas D. Thacher.

STATED MEETING

THE HARVEY SOCIETY (IN AFFILIATION WITH THE NEW YORK ACADEMY OF MEDICINE)
THE FOURTH HARVEY LECTURE, "The Investigation of Intermediary Metabolism with the Aid of Heavy Hydrogen," R. Schoenheimer, Assistant Professor of Biological Chemistry, College of Physicians and Surgeons, Columbia University. This lecture took the place of the second Stated Meeting of the Academy for January.

SECTION MEETINGS

SECTION OF DERMATOLOGY AND SYPHILOLOGY—January 5

I. READING OF THE MINUTES.

II. PRESENTATION OF CASES—a. New York University College of Medicine; b. Miscellaneous cases.

III. DISCUSSION OF SELECTED CASES.

IV. EXECUTIVE SESSION.

SECTION OF SURGERY—January 8

I. READING OF THE MINUTES.

II. PRESENTATION OF CASES—a. Neuroblastoma of the small intestine (two cases), Saul Alfred Ritter; b. A case of Hodgkin's disease of the ileum, Abraham Lightstone; c. A case of left para-duodenal hernia, John A. Lawler; d. 1. A case of perforated peptic ulcer in an intramesenteric variety of Meckel's diverticulum. Operative cure; 2. A case of hemorrhage from a peptic ulcer in Meckel's diverticulum. Operative cure, James E. Thompson.

III. PAPERS OF THE EVENING—a. Meckel's diverticulum. Its incidence and significance in routine abdominal surgery, B. A. Goodman; b. Carcinoma of duodenum. A clinical and radiological study of eighteen cases, William J. Hoffman, George T. Pack.

IV. GENERAL DISCUSSION.

V. EXECUTIVE SESSION.

COMBINED MEETING OF THE SECTION OF NEUROLOGY AND PSYCHIATRY AND THE NEW YORK NEUROLOGICAL SOCIETY—January 12

I. PAPERS OF THE EVENING—a. The origin and nature of the hypoglycemic therapy of the psychoses, Manfred Sakel (by invitation); Discussion: Clarence O. Cheney, Karl M. Bowman; b. Clinical experiences with the hypoglycemic treatment of the psychoses, Bernard Glueck; Discussion: John Ross, Smith Ely Jelliffe, D. Ewen Cameron (by invitation); c. Experiences at Bellevue with the hypoglycemic treatment of the psychoses, Joseph Wortis (by invitation); Discussion: Adolf Meyer.

SECTION OF HISTORICAL AND CULTURAL MEDICINE—January 13

I. READING OF THE MINUTES.

II. PAPERS OF THE EVENING—a. Rabelais as a physician, Frederick T. van Beuren, Jr.; b. Count Cagliostro—A great charlatan of the eighteenth century, George H. Lathrope (by invitation).

III. GENERAL DISCUSSION: Russell L. Cecil, Archibald Malloch, Frederick T. van Beuren, Jr.

SECTION OF PEDIATRICS—January 14

I. PAPERS OF THE EVENING—a. The current status of the diphtheria vaccines, Ralph S. Muckenfuss (by invitation); Discussion by William H. Park, Hugh Chaplin, J. Leon Blumenthal; b. The present status of preventive inoculations against whooping cough, Louis W. Sauer, Northwestern University (by invitation); Discussion by Bela Schick, William H. Park, Miss Lucy Mishulow (by invitation), Hattie E. Alexander (by invitation), Louis W. Sauer; After the discussion, a film of Louis W. Sauer's entitled: "The Control of Pertussis" was presented.

SECTION OF ORTHOPEDIC SURGERY

The regular meeting of the Section of Orthopedic Surgery for January was omitted because of the meeting of the American Academy of Orthopedic Surgeons, held in Cleveland, January 10 to 14.

SECTION OF OPHTHALMOLOGY—January 18

Program arranged by THE NEW YORK EYE AND EAR INFIRMARY

Instructional Hour, 7:00 to 8:00 p.m.

ORTHOPTIC TRAINING—Conrad Berens.

DEMONSTRATIONS—1. Pathology Department, Bernard Samuels, E. B. Burchell (by invitation); 2. Motor anomalies; perimetry; reading diagnostic service, Conrad Berens; 3. Aniseikonia Department—Demonstration of tilting table, H. M. Fisher (by invitation).

REGULAR PROGRAM

I. READING OF THE MINUTES.

II. PRESENTATION OF CASES—a. Dacryocystorhinostomy—technique and results, Loren P. Guy; Discussion by: Webb W. Weeks; b. Aniseikonia with no refractive error, Wendell L. Hughes; c. Dinitro-phenol cataract, Clyde E. McDannald; d. Use of scotch tape for retaining eye dressings, Donald Bogart (by invitation); e. Venous angioma of the orbit, William B. Doherty; f. Scleromalacia perforans, Samuel P. Oast.

III. PAPERS OF THE EVENING—a. Glaucoma and sympathetic ophthalmia, Bernard Samuels; b. Pathology of the orbit—x-ray studies, Irving Schwartz.

SECTION OF MEDICINE—January 19

Recent Advances in Vitamin Research

I. PAPERS OF THE EVENING—a. Vitamin C excretion in normal and vitamin C deficient subjects and an excretory test for vitamin C deficiency, Elaine P. Ralli; b. Polyneuritis as a clinical manifestation of vitamin B (B1) deficiency in the alcohol addict, Norman Jelliffe; c. The vitamin G or flavin factor of the vitamin B complex, Henry C. Sherman (by invitation); Discussion: George R. Cowgill, New Haven (by invitation), Henry C. Sherman, Irving S. Wright.

II. GENERAL DISCUSSION.

SECTION OF GENITO-URINARY SURGERY—January 20

I. READING OF THE MINUTES.

II. PAPERS OF THE EVENING—a. Problems in the surgery of renal calculi, Thomas E. Gibson, San Francisco (by invitation); b. Management of ureteral calculi in the lower third of the ureter, Arbor D. Munger, Lincoln, Neb. (by invitation); c. Review of "V" type nephrotomy of staghorn calculi with especial reference to final results, George C. Prather, Boston (by invitation); Discussion to be opened by: Charles C. Higgins, Cleveland, Ohio (by invitation); Discussions continued by: Henry C. Bugbee, Howard S. Jeck, Francis P. Twinem.

III. GENERAL DISCUSSION.

SECTION OF OTOLARYNGOLOGY—January 20

Care and Training of the Deaf and Hard of Hearing Child

(The New York State Law now requires that all children under six years of age with hearing losses be reported)

I. READING OF THE MINUTES.

II. PAPERS OF THE EVENING—a. Hearing and its conservation in the schools, William E. Grady (by invitation), Assoc. Supt. Schools, N. Y. C.; b. Organizations for service to the hard of hearing—1. National, Betty C. Wright (by invitation), Amer. Soc. for H. of H.; 2. Local, Annette W. Peck (by invitation), Exec. Sec. N. Y. League for H. of H.; c. Service in New York City's School for the Deaf, Jay D. Whitham (by invitation), Aurist P. S. 47; d. Fundamentals of lip reading including demonstrations with the audience as subjects, Estelle Samuelson (by invitation), N. Y. League for H. of H.; e. Parent-teacher training, Irene B. Young (by invitation), Sec. Amer. Nursery Schools for speech and hearing; f. Role of prevention clinics, Westley M. Hunt; Discussion by: Ross Faulkner, Elizabeth Gardiner, Dir. Div. Child Hygiene, N. Y. State Dept. of Health; Hugh G. Rowell (by invitation), John Durkee (by invitation); August Hambrook (by invitation), Chair. Pub. Rel. Com. Med. Soc., State of N. Y.; David Caplin, Asst. Dir. Health N. Y. State Ed. Dept; Emily Pratt (by invitation), Supt. N. Y. State Ed. Dept.; g. Rehabilitation of the deaf child (demonstration with pupils from the Central Institute for the Deaf), Max A. Goldstein (by invitation).

III. GENERAL DISCUSSION.

IV. EXECUTIVE SESSION.

SECTION OF OBSTETRICS AND GYNECOLOGY—January 26

Program presented by the staff of THE LYING-IN HOSPITAL)
(Department of Obstetrics and Gynecology, New York Hospital)

PAPERS OF THE EVENING—a. Erythroblastosis fetalis as a cause of infantile mortality, Carl T. Javert (by invitation); b. Prevention and control of puerperal infection due to the beta hemolytic streptococcus, R. Gordon Douglas (by invitation); Discussion: Herbert F. Traut; c. Management of breech, Hervey C. Williamson; Discussion: C. Frederic Jellinghaus; d. The significance of the blood loss during the third stage of labor, John B. Pastore (by invitation); Discussion: Byron H. Goff; e. Evaluation of male fertility—A motion picture demonstration, William H. Cary (by invitation); Discussion: Robert S. Hotchkiss (by invitation).

AFFILIATED SOCIETIES

NEW YORK ROENTGEN SOCIETY

The regular January Meeting was omitted because of the Eastern Conference of Radiologists held in this city January 29 and 30.

NEW YORK MEETING OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE—January 20

I. Synthesis of protein and amino acids in mice with the aid of deuterium, J. A. Stekol, W. H. Hamill.

II. pH changes of muscle during and after contraction, M. Dubuisson (Introduced by L. Michaelis).

III. Treatment of cardiac insufficiency with a preparation containing two water-insoluble glucosides of squill, R. L. Levy, F. L. Chamberlain.

IV. A complement-fixation reaction involving the rabbit papilloma virus (Shope), J. G. Kidd (Introduced by P. Rous).

V. Leucocyte infiltration of mouse sarcoma 180 irradiated *in vivo* and *in vitro*, R. Chambers, C. G. Grand.

VI. Radiosensitivity of mouse sarcoma 180 irradiated *in vivo* and *in vitro*, P. S. Henshaw, K. Sugiura.

VII. Some effects of iodine given to rabbits after a period of cholesterol feeding, K. B. Turner, E. H. Bidwell.

NEW YORK PATHOLOGICAL SOCIETY *in affiliation with* THE NEW YORK ACADEMY OF MEDICINE—January 28

The Anniversary Meeting

I. CASE REPORTS—a. Two cases of tuberculosis of the myocardium, Russell Holman (by invitation) and J. J. Hawthorne.

II. Papers of the Evening—a. Rheumatic commissural lesions and their relation to the so-called congenital bicuspid aortic valve of the adult, Louis Gross; b. Physiological response of prostatic and vesicular tissue transplanted into the eye, Robert A. Moore, H. B. Rosenblum (by invitation), S. H. Tolins (by invitation) and R. M. Melchionna (by invitation).

III. Executive Session. Election of Officers.

DEATHS OF FELLOWS OF THE ACADEMY

Holden, Ward Andrews, A.B., M.D., 2 East 54 Street, New York City; received the degree of Bachelor of Arts from Marietta College of Ohio in 1884 and the degree of Doctor of Medicine from the Ohio Medical College in 1887; elected a Fellow of the Academy December 6, 1894; died January 24, 1937.

Dr. Holden was honorary surgeon to the Herman Knapp Memorial Eye Hospital and oculist to The Neurological Institute. He was at one time professor of clinical ophthalmology at the College of Physicians and Surgeons.

Dr. Holden was a member of the American Ophthalmological Society and a Fellow of the American Medical Association.

He was the author of several books and many papers on ophthalmological subjects.

Steiner, Joseph Manning, M.D., 170 East End Avenue, New York City; graduated in medicine from Tulane University in 1904; elected a Fellow of the Academy January 15, 1925; designated a Fellow in Radiology in 1933; died January 27, 1937.

Dr. Steiner was consulting roentgenologist to the New York Infirmary for Women and Children. He was at one time head of the x-ray department of the Roosevelt Hospital.

Dr. Steiner held a certificate from the American Board of Radiology and was a member of the American Roentgen Ray Society, the American College of Radiology, the New York Society of Approved Roentgenologists and the County and State Medical Societies. He was also a Fellow of the American Medical Association.

Warren, Luther Fiske, M.D., 200 Hicks Street, Brooklyn, New York; graduated in medicine from the University of Michigan in 1909; elected a Fellow of the Academy October 1, 1914; died January 18, 1937.

Dr. Warren was chief physician to the Long Island College and St. John's Hospitals and consultant physician to the Harbor, Coney Island, South Side and Methodist Episcopal Hospitals. Since 1928 he had been head of the department and professor of medicine at the Long Island College of Medicine. He was at one time president of the New York State Board of Medical Examiners.

Dr. Warren was a Fellow of the American College of Physicians and the American Medical Association, and a member of the American Society for the Advancement of Science, the National Tuberculosis Association and the County and State Medical Societies.